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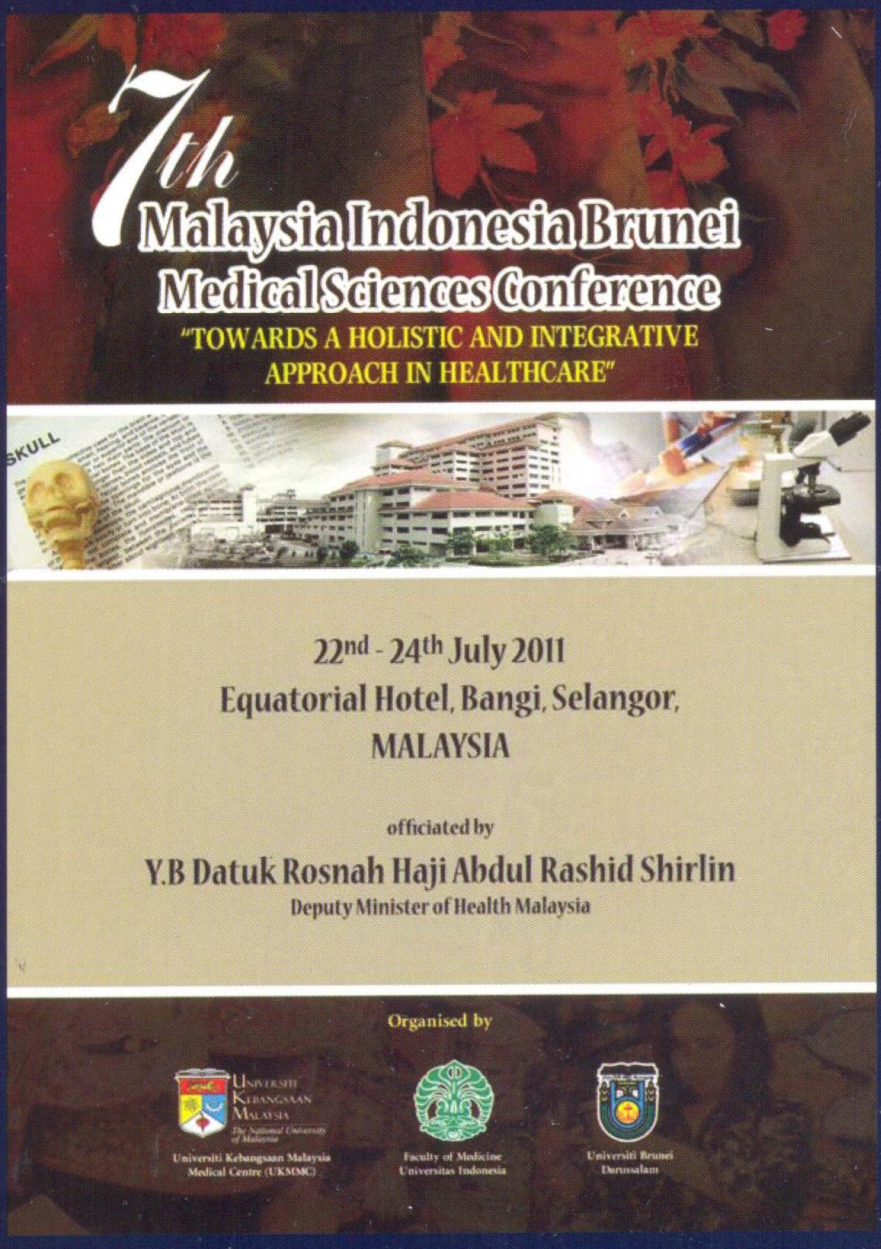

SENSITIVITY OF WHOLE BLOOD CLOTTING TIME COMPARED TO ACTIVATED PARTIAL THROMBOPLASTIN TIME

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Background:
Whole blood clotting time (WBCT) was first introduced by Lee and White in 1912 as a method to assess the clotting system. The role of WBCT in the assessment the intrinsic pathway of coagulation system has later been replaced by activated partial thromboplastin time (APTT) due to higher sensitivity and this test can be done by an automatic coagulometer. However, many clinicians still request WBCT as a part of the preoperative screening test. The aim of this study was to evaluate the sensitivity of WBCT compared to APTT in detecting coagulation abnormality.

Materials & Method:
One hundred patients who underwent coagulation tests were enrolled in this cross sectional study. Whole blood clotting time was performed by the Lee and White method, while APTT was performed on automatic coagulometer Sysmex CA 560. The resupormal or abnormal test was based on their reference value. Statistical analysis was done by Fisher exact test.

Results:
Abnormal coagulation was found in 56 and 13 out of 100 subjects by APTT and WBCT, respectively. There was a significant difference between WBCT and APTT in detecting coagulation abnormality with $p<0.000$. Sixteen out of 100 subjects were haemophiliac, but only 8 patients indicated prolonged WBCT. WBCT started to prolong at 70 seconds of APTT. The sensitivity and specificity of WBCT was only 23.2% and 100%, respectively.

Conclusion:
There was a significant difference between WBCT and APTT in detecting coagulation abnormality. The sensitivity of WBCT in detecting abnormal coagulation was 23.2% compared to APTT. Therefore WBCT is not recommended as a preoperative screening test.

Keywords:
WBCT, APTT, coagulation abnormality, sensitivity.